



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/977,124	10/23/2007	Kieran P. Mockford	321214.01	1106

69316 7590 05/22/2017
MICROSOFT CORPORATION
ONE MICROSOFT WAY
REDMOND, WA 98052

EXAMINER

VU, TUAN A

ART UNIT	PAPER NUMBER
----------	--------------

2193

NOTIFICATION DATE	DELIVERY MODE
-------------------	---------------

05/22/2017

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

usdoCKET@microsoft.com
chrioCHS@microsoft.com

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte KIERMAN P. MOCKFORD

Appeal 2016-000871
Application 11/977,124
Technology Center 2100

Before THU A. DANG, CARL L. SILVERMAN, and
NORMAN H. BEAMER, *Administrative Patent Judges*.

DANG, *Administrative Patent Judge*.

DECISION ON APPEAL

I. STATEMENT OF THE CASE

Appellant appeals under 35 U.S.C. § 134(a) from the Examiner's second non-final rejection of claims 21–25, 28–32, 35, and 36. The Examiner indicates that claims 26, 27, 33, 34, and 37–40 contain allowable subject matter. Final. Act. 26. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

A. INVENTION

According to Appellant, the invention relates to “predicting costs of build phases and using the predicted costs to improve distributed build scheduling” (Spec. ¶ 3).

B. CONTESTED CLAIM

Independent claim 21 is reproduced below:

21. A method implemented on a computer having at least one processor, the method comprising:

obtaining build data including a plurality of build phases of a distributed build process and components built in each build phase, the distributed build process distributed onto a plurality of build machines, the build process generating a software application for distribution to end users, each build phase creating one or more components; and

for at least one build phase of the distributed build process:

calculating a predicted cost for creating each component built in a later build phase of the distributed build process, each predicted cost calculated during execution of a previous build phase of the distributed build process, wherein each predicted cost estimates an amount of resources needed to create a specific component of the later build phase, and

scheduling creation of the components of the later build phase onto a plurality of build machines in a load balanced manner using the predicted costs.

C. REFERENCES AND REJECTION¹

The prior art relied upon by the Examiner as evidence in rejecting the claims on appeal is:

Leonard	US 5,729,746	Mar. 17, 1998
Wolff	US 2003/0126200 A1	July 3, 2003
Corral	US 2003/0188290 A1	Oct. 2, 2003

¹ In the event of further prosecution, we leave it to the Examiner to also consider if the claims (reciting the steps of “obtaining data,” “calculating” a cost, and “scheduling” creation) are directed to a patent-ineligible abstract idea and whether the claims have an “inventive concept” beyond the abstract idea under the Supreme Court’s *Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 134 S. Ct. 2347 (2014).

Guheen	US 2004/0107125 A1	June 3, 2004
Anant	US 2004/0204972 A1	Oct. 14, 2004
Robin	US 2005/0114829 A1	May 26, 2005
Abu el Ata	US 7,035,786 B1	Apr. 25, 2006
Davies	US 2007/0088740 A1	Apr. 19, 2007
Bahrs	US 2007/0180115 A1	Aug. 2, 2007
Pabalate	US 2008/0016490 A1	Jan. 17, 2008
Islam	US 7,519,964 B1	Apr. 14, 2009
Gilpin	US 7,571,082 B2	Aug. 4, 2009
Zaumen	US 7,689,714 B1	Mar. 30, 2010
Cassone '663 ("Cassone2")	US 7,949,663 B1	May 24, 2011
Cassone '238 ("Cassone")	US 8,108,238 B1	Jan. 31, 2012

Claims 21, 24, 28, and 31 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Cassone, Cassone2, and/or Anant, and/or Leonard, Abu El Ata, Guheen, and/or Admitted Prior Art (APA), and/or Robin, Zaumen, and/or Islam, and Wolff.

Claims 22 and 29 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Cassone, Cassone2, and/or Anant, and/or Leonard, Abu El Ata, Guheen, and/or Admitted Prior Art (APA), and/or Robin, Zaumen, and/or Islam, and Wolff.

Claims 23 and 30 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Cassone, Cassone2, and/or Anant, and/or Leonard, Abu El Ata, Guheen, and/or Admitted Prior Art (APA), and/or Robin, Zaumen, and/or Islam, Davies, and Bahrs.

Claims 25 and 32 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Cassone, Cassone2, and/or Anant, and/or Leonard, Abu El

Ata, Guheen, and/or Admitted Prior Art (APA), and/or Robin, Zaumen, and/or Islam, Pabalate, and/or Corral.

Claim 35 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Cassone, Cassone2, and/or Anant, and/or Leonard, Abu El Ata, Guheen, and/or Admitted Prior Art (APA), and/or Robin, Zaumen, and/or Islam, and Gilpin.

Claim 36 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Cassone, Cassone2, and/or Anant, and/or Leonard, Abu El Ata, Guheen, and/or Admitted Prior Art (APA), and/or Robin, Zaumen, and/or Islam, Gilpin, and Pabalate, and/or Corral.

II. ISSUES

The principal issues before us are whether the Examiner erred in finding that Cassone, in combination with the other applied references, *teaches or suggests* 1) “obtaining build data” which includes a plurality of “build phases of a distributed build process and components built in each build phase,” the build process “generating a software application for distribution to end users . . . ;” and 2) for at least one build phase, “calculating a predicted cost for creating each component built in a later build phase . . . during execution of a previous build phase . . .” (claim 21).

III. FINDINGS OF FACT

The following Findings of Fact (FF) are shown by a preponderance of the evidence.

Cassone

1. Cassone discloses project governance based on predictive analysis (Abst.). According to Cassone, a project development project is a temporary endeavor to develop a new product or service, wherein a project development pipeline is used to organize and optimize the allocation of resources for a stream of development projects, with the resources including time, money, people, materials, and the like (col. 1, ll. 20–26). The project development pipeline consists of a chain of process phases and resources arranged so that the output of each element of the chain flows into the input of the next element, wherein the projects in the project development pipeline are governed to insure that the project is completed on time and within budget (col.1, ll. 26–36). In Cassone, the project development pipeline may be a software development pipeline, wherein project information is reviewed at each gate to determine whether development of the corresponding project is ready to proceed to the next phase (col. 3, ll. 27–42).

2. Figure 4 is reproduced below:

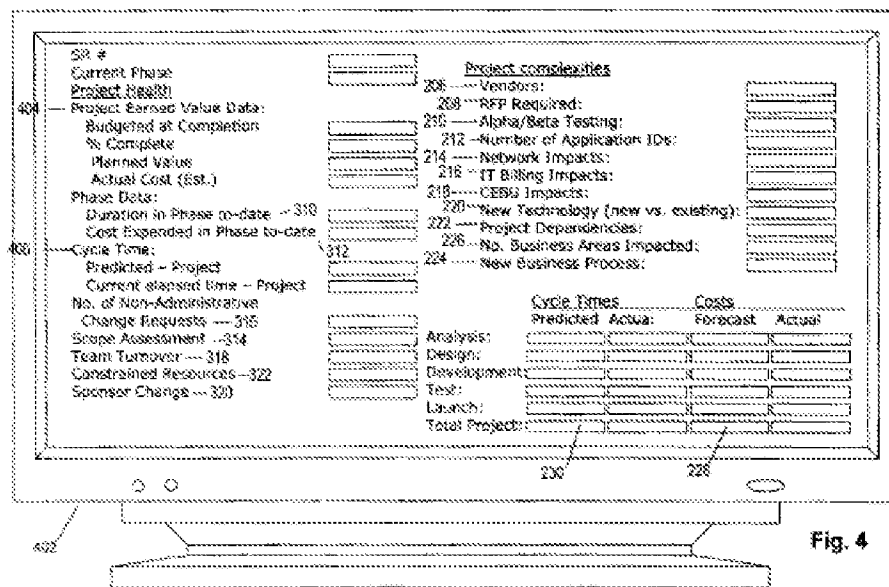


Fig. 4

Figure 4 shows a user interface for flexible project governance based on predictive analysis. The user interface 402 enables a user to enter data for project complexity factors and project governance factors (col. 6, ll. 45–46). As shown in Figure 4, a table 200 of project complexity factors is provided, wherein the table 200 includes total project cost 228 column for both forecast and actual values, and a projected project length 230 column for predicted and actual values (col. 3, ll. 52–65).

3. Project governance factors are periodically analyzed to determine a project governance index (col. 8, ll. 6–8), wherein cost performance index (CPI) and schedule performance index (SPI) factors are included in project management processes (col. 8, ll. 38–41). The project complexity factors are analyzed to determine a revised project complexity index (col. 9, ll. 20–29). For example, if the number of vendors increases, the number of applications impacted increases, and the total project cost also increases, and thus the revised project complexity index increases relative to the previously generated project complexity index (col. 9, ll. 35–39). The builder analyzes the construction costs and other requirements, and the parties review the analysis and costs, and determine whether to proceed (col. 9, ll. 56–66). Once completed, the product is provided to the buyer (i.e., for home building, the homeowners move into the house)(col. 10, ll. 4–9).

IV. ANALYSIS

In reaching this decision, we consider all evidence presented and all arguments actually made by Appellant. We do not consider arguments that Appellant could have made but chose not to make in the Briefs, and we deem any such arguments waived. 37 C.F.R. § 41.37(c)(1)(iv).

With respect to claim 21, Appellant contends “[t]he Examiner is broadly construing the term ‘build phase’ in claim 21 to read on the concept, analysis, design, development, test, and launch phases” which “conflicts with Appellant’s specification which clearly defines the term ‘build phase’ . . . to include a clearly distinguishable period or stage in an overall process.” App. Br. 12. According to Appellant, “[a]s is well-known in the art, the build process is specific to the process of generating binary files that are distributed.” *Id.* Accordingly, Appellant contends the claimed “build process differs from the development process of *Cassone*,” wherein, in the Office Actions, “the Examiner combines various unrelated to a build process” and “impermissibly misconstrues the cited references in a manner that entirely ignore the context of the claim language” (*id.* at 14).

Appellant contends Cassone’s “phases in building a house, . . . differ from the build process of claim 21” because “claim 21 also recites ‘the build process generating a software application for distribution to end users.’” *Id.* at 15. Further, Appellant contends “*Cassone* does not teach the ‘build process’” that is “distributed onto a plurality of gates” as the Examiner finds, because Cassone’s gates “are used to pause a development project after the completion of certain phases to provide governance – that is, check if the development project is going to be completed on time and within budget before continuing to the next phase” wherein “[t]he build process of the claimed invention has no governance” (*id.* at 16).

Appellant also contends Cassone does not teach the “predicted cost” of the independent claims “since the project complexity index and the project governance index are not used for ‘creating each component built in a later build phase of the distributed build process’” (*id.* at 18).

Although Appellant concedes that *Cassone2* discloses “historical data,” Appellant contends “[t]he historical data of the past projects in *Cassone2* is used to generate sub-models” which are “used to predict a cycle time or cost,” but the historical data itself is not used to predict the cycle time or cost (*id.* at 20). According to Appellant, “[b]oth the cycle time and the cost of *Cassone2* differ from the predicted cost of claim 21 since the cost of *Cassone2* does not estimate the amount of resources needed in one or more build phases” (*id.*). Appellant contends that “the Examiner is impermissibly construing the past project of *Cassone2* as a build phase” (*id.*), because the costs in *Cassone2* “are with respect to an entire development project which differs from a specific component of a later build phase” (*id.* at 24).

Appellant then contends *Anant* and *Leonard* do not teach “a predicted cost calculated during execution of a previous build phase of a distributed build process” (*id.* at 21). In particular, “*Anant* is concerned with finding out the maximum return of an investment in a software verification and validation activity based on these hypothetical network costs” while “the predicted cost of *Leonard* is an estimation of the final size of a software product in terms of the total number of lines of code” (*id.* at 25). Similarly, “*AbuAta* does not utilize the predictive modeling engine until after a phase finishes execution” (*id.* at 22) while *Guheen*’s scheduling of tasks is “not based on a predicted cost” because “*Guheen* has no way to predict the number of requests that the network service component may receive from clients in advance” (*id.* at 26). Appellant also contends *Zaumen* and *Islam* do not teach “load balancing” of claim 21 (*id.* at 27).

Based on the record before us, we disagree with Appellant's contentions regarding the Examiner's rejections of claim 21. Instead, we agree with the Examiner's findings, and find no error with the Examiner's conclusion that claim 21 would have been obvious over the combination of the cited references.

As an initial matter of claim construction, we give claim 21 its broadest reasonable interpretation consistent with the Specification. *See In re Morris*, 127 F.3d 1048, 1054 (Fed. Cir. 1997). However, "limitations are not to be read into the claims from the specification." *In re Van Geuns*, 988 F.2d 1181, 1184 (Fed. Cir. 1993) (citations omitted).

We note that claim 21 merely defines "build phases" as "of a distributed build process," wherein, for at least one of the build phases, the predicted cost is calculated and creation of the components of a later build phase is scheduled (claim 21). Furthermore, we agree with the Examiner that the Specification does not provide a clear definition for "build phase" (Ans. 27). As Appellant points out, Appellant's Specification merely defines the term "'build phase' . . . to include a clearly distinguishable period or stage in an overall process" (App. Br. 12). We agree with the Examiner that the Specification merely states that "the term 'build process' can be part of more processes, or stage of more stages, and can include one or more functionalities or stages" (Ans. 27). Thus, nothing in the Specification defines a "build process" as "specific to the process of generating binary files that are distributed" and precludes it from the development process of Cassone (App. Br. 12), as long as a "phase" is a period or stage of the development/building process for generating a software application. Absent definition in the Specification to the contrary,

we conclude a broad but reasonable interpretation of the contested claim term covers obtaining data including a plurality of phases of a process for developing/building/generating a software application for distribution.

Cassone discloses a project development project to develop a new product or service using a project development pipeline, such as a software development pipeline, wherein project information is reviewed at each gate to determine whether development of the corresponding project is ready to proceed to the next phase (FF 1), and once completed, the product is provided to the buyer (FF 3). That is, Cassone teaches or at least suggests a process for developing/building a software which comprises a plurality of phases (FF 1) to be provided to the buyer/end user (FF 3). Thus, although Appellant contends “Cassone does not teach the ‘build process’” of claim 21 (App. Br. 15–16), in view of the broadest reasonable interpretation of the claims, we agree with the Examiner reliance on Cassone to at least suggests a plurality of “build phases of a distributed build process” and “components built in each build phase,” wherein Cassone’s development/build process “generat[es] a software application for distribution to end users . . . ,” as recited in claim 1.

Further, we agree with the Examiner that “Cassone’s method is to predict cost and determine what can be done for the remaining part of a project” based on “analyzing or revising cost, resource expenditure (e.g. costs performance...) and impact from gathered statistics and reports descriptive of historical data and resource usage associated with previous stages” (Ans. 34). Contrary to Appellant’s contention (App. Br. 18), we agree that Cassone at least suggests an analysis “for predicting a cost” (Ans. 34).

In particular, Cassone discloses project governance based on predictive analysis, wherein a project development pipeline organizes and optimizes the allocation of resources for a stream of development projects, the project development pipeline comprising a chain of process phases and resources, with the output of each element of the chain flows into the input of the next element, to insure that the project is completed on time and within budget (FF 1). In Cassone, if the number of vendors increases, for example, the total project cost also increases, and the builder analyzes the construction costs and other requirements, and the parties review the analysis and costs and determine whether to proceed (FF 3). Cassone's Figure 4, for example, illustrates a table used for flexible project governance based on predictive analysis, wherein the total project cost is calculated from forecast and actual values from each phase in the project (FF 2).

We find no error with the Examiner's finding that Cassone discloses a "predictive analysis" by which "an optimum number a project gates can be allocated to carry out the project," where "cost and past resources are analyzed to predict what amount of resources that would be required and suitable proactively for handling the project," to "alleviate . . . too complex, costly . . . or too resource-intensive compared to prediction from the previous stages," whereby "a predicted cost governance index is founded on observed costs" (Ans. 35, referencing Cassone Fig. 4). Thus, we agree that Cassone at least suggests, for at least one build phase, "calculating a predicted cost for creating each component built in a later build phase . . . during execution of a previous build phase . . ." as required by claim 21.

Furthermore, as the Examiner points out, by arguing as to what Cassone2, Anant, Leonard, Abu El Ata, Guheen, Zaumen, and/or Islam,

lack, Appellant appears to be arguing against the references individually (App. Br. 19–28), when the rejections are based on a combination of references (Ans. 35). That is, the test for obviousness is what the combination of references cited by the Examiner teaches or suggests to one of ordinary skill in the art. *Id.*, citing *In re Keller*, 642 F. 2d 413, 208 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986). Based on the record before us, we are unpersuaded the Examiner erred in finding the combination of Cassone, Cassone2, and/or Anant, and/or Leonard, Abu El Ata, Guheen, and/or Admitted Prior Art (APA), and/or Robin, Zaumen, and/or Islam, and Wolff teaches or at least suggests the contested limitation.

We also find no error with the Examiner’s conclusion that it would have been obvious to combine the references (Ans. 14–15). The Supreme Court has clearly stated the “combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.” *KSR Int’l Co. v. Teleflex, Inc.*, 550 U.S. 398, 416 (2007). The skilled artisan is “a person of ordinary creativity, not an automaton.” *Id.* at 421. We conclude that it would have been well within the skill of one skilled in the art to combine the references. *Id.* at 417. That is, we find that Appellant’s invention is simply a modification of familiar prior art teachings (as taught or suggested by the cited references) that would have realized a predictable result. *Id.* at 421.

On this record, we are unconvinced of Examiner error in the rejection of claim 21 over Cassone, Cassone2, and/or Anant, and/or Leonard, Abu El Ata, Guheen, and/or Admitted Prior Art (APA), and/or Robin, Zaumen, and/or Islam, and Wolff. Appellant does not provide substantive arguments

for claim 28 separate from claim 21 (App. Br. 28). Accordingly, claim 28 falls with claim 21.

Appellant does not provide substantive arguments for claim 35 but instead merely repeats the claim language and then contends that the cited references fail to “teach” the contested limitations (App. Br. 29–30). That is, Appellant presents mere attorney arguments without any factual support. Our reviewing court guides that such mere attorney conclusory statements which are unsupported by factual evidence are entitled to little probative value. *In re Geisler*, 116 F.3d 1465, 1470 (Fed. Cir. 1997); *In re De Blauwe*, 736 F.2d 699, 705 (Fed. Cir. 1984); and *Ex parte Belinne*, 2009 WF 2477843, at *3–4 (BPAI Aug. 10, 2009) (informative). Thus, on this record we are unconvinced the Examiner erred in also rejecting claim 35 over Cassone, Cassone2, and/or Anant, and/or Leonard, Abu El Ata, Guheen, and/or Admitted Prior Art (APA), and/or Robin, Zaumen, and/or Islam, and Gilpin

Appellant does not provide separate arguments for claims 22–34 and 36 other than they “are allowable at least because they depend from and provide further patentable limitations” to claims 21, 28, and 35 respectively (App. Br. 30–31). On this record, we also affirm the rejections of these claims respectively depending from claim 21, 28, and 35.

V. CONCLUSION AND DECISION

We affirm the Examiner’s rejection of claims 21–25, 28–32, 35, and 36 under 35 U.S.C. § 103(a).

Appeal 2016-000871
Application 11/977,124

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED